

## **REMARKS**

### **Rejection under 35 U.S.C 112, First Paragraph**

In the Advisory Action and the final Office Action, it was indicated that claims 1-3 fails to comply with the written description requirement. The Office Action indicated that the claim language “the correction offset signals are independent to gains of the amplifiers” cannot find support in the specification.

Applicant respectfully disagrees. Support for such limitation can be found in paragraphs [0039] and [0042].

In addition, Applicant has amended paragraphs [0039] and [0042] so as to more clearly explain equations (4) and (6) that are presented in the original specification.

Applicant respectfully states that no new matter is added for the above amendments to the paragraphs [0039] and [0042]. Equations are also parts of the original specification. Therefore, from the equations (4) and (6), one of ordinary skill in the art can understand that correction offset signals, i.e., the voltage signals  $V_{osadd}$ ,  $V_{ossub}$  are not function of gain  $G$ . In other words, the correction offset signal are independent to gain  $G$  of the amplifiers.

In addition, the Examiner also stated that “the correction offset signals with a fixed value are previously added to the inputs of the amplifiers” is not recited in claims. In response, Applicant has amended claim 1 to recite “the correction offset signals with a fixed value are previously added to the inputs of the amplifiers”. These features can be found in FIGs 2 and 4-5. Therefore, no new matter is added for such amendments.

### **Rejection under 35 U.S.C 102**

Claims 1-3 were rejected under 35 U.S.C. 102(b) as being anticipated by Bradshaw.

Applicant respectfully traverses the rejection for the reasons given below.

According to the Bradshaw reference, the offset adjustment relates to the gain. However, the correction offset signal recited in claims of the present invention does not relate to the gain. According to the description of col. 8, lines 55-63 of the Bradshaw reference, when the setting of the gain control signal in step S7, S8, S10 or S11 is finished, to correct an offset change in association with the gain setting, the controller 9 executes an offset adjustment to the amplifier or

adder. Therefore, *it is very clear that the offset is changed according to the setting of the gain control signal*. Namely, the offset is related to the gain. In the Bradshaw reference, Bradshaw discloses a method to set the gain control signal to vary the gain, by which the offset can be changed according to the gain, or the gain control signal. Therefore, *the offset of the Bradshaw reference is dependent on the gain*. The Bradshaw reference fails to disclose, teach or suggest that correction offset signal is independent of gain, and therefore, Bradshaw fails to disclose a gain-independent offset correction mechanism.

Furthermore, in response to the Office Action on page 5, second paragraph, the Office Action seems to be confused with the present invention and the cited reference. The present invention claims features that *the offset adjustment is not necessary even though the gain is varied*. However, in the cited reference, Bradshaw teaches a concept that the offsets can be independently adjusted even though the gain is varied. Therefore, basically, the concepts of the present invention and the Bradshaw reference are completely different.

The present invention discloses that a correction offset signal with a fixed value is previously added to the input of the amplifier (as recited in the amended claim 1), so that the offset is eliminated even though the offset of the amplifier varies due to the gain variation. This concept of the present invention is different from the Bradshaw reference. The “correction offset signal” is not the gain control signal that causes the offset variation of the Bradshaw reference.

In addition, according to the Bradshaw reference on col. 8, lines 55-63, *after the setting of the gain control signal is finished, an offset adjustment is performed to the amplifiers or the adders in order to compensate the offset variation when the controller 9 executes a gain setting*.

However, according to the Bradshaw disclosure, the controller 9 performs the offset adjustment to the amplifiers or the adders every time the gain is changed. The Bradshaw disclosure fails to disclose a correction offset with a fixed value is previously added to the input of the amplifier as disclosed in the present invention. The prior art cannot achieve an effect that the correction offset voltage is not necessary to be changed even if the gain is varied.

For at least the foregoing reasons, Applicants respectfully submit that independent claim 1 patently defines over the prior art, and should be allowed. For at least the same reasons, dependent claims 2-3 patently define over the prior art as well.

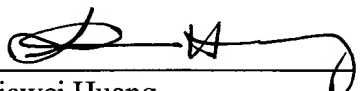
### CONCLUSION

For at least the foregoing reasons, it is believed that all the pending claims 1-3 of the invention patentably define over the prior art and are in proper condition for allowance. If the Examiner believes that a telephone conference would expedite the examination of the above-identified patent application, the Examiner is invited to call the undersigned.

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